

### REMARKS

Claims 1-20 are pending, wherein claims 2, 6, 7 and 12 have been amended. No claims were added or cancelled by this amendment. Reconsideration and allowance for the above-identified application are now respectfully requested.

Preliminarily, Applicant wishes to thank the Examiner for withdrawing the previous objections to claims 7 and 8 and also the previous rejection of claims 1-12 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Loercks, Koster and Figlar.

The Office Action presents a new objection to claims 7 and 12 on the grounds they include extraneous and/or incorrect information. In response, Applicant has by this amendment made the changes as suggested by the Examiner. Applicant therefore requests reconsideration and withdrawal of the objections to claims 7 and 12.

The Office Action rejects claims 1-2 under 35 U.S.C. § 112, second paragraph, on the grounds they are indefinite, particularly with respect to the use of the term "preferably" in claim 2. In response, Applicant has removed this term from claim 2. Accordingly, Applicant requests reconsideration and withdrawal of this rejection.

The Office Action rejects claims 1-20 under 35 U.S.C. § 103(a) as being unpatentable over Figlar et al. (US 6,779,529) in view of Loercks et al. (US 6,062,228) and Zhuang et al. (US 6,814,786). In response, Applicant respectfully submits that Zhuang et al. is not prior art to the claims of the present application and that therefore the Office Action fails to establish a *prima facie* case of obvious relative to claims 1-20.

The present application is a national phase application of International Application No. PCT/EP03/11493 and therefore enjoys an actual filing date of October 16, 2003. In addition, the present application claims the benefit of earlier filed German Application No. 102 52 823.3 under 35 U.S.C. § 119(a). This section provides:

An application for patent for an invention filed in this country by any person who has, or whose legal representatives or assigns have, previously regularly filed an application for a patent for the same invention in a foreign country which affords similar privileges in the case of applications filed in the United States or to citizens of the United States, or in a WTO member country, *shall have the same effect as the same application would have if filed in this country on the date on which the application for patent for the same invention was first filed in such*

*foreign country*, if the application in this country is filed within twelve months from the earliest date on which such foreign application was filed; but no patent shall be granted on any application for patent for an invention which had been patented or described in a printed publication in any country more than one year before the date of the actual filing of the application in this country, or which had been in public use or on sale in this country more than one year prior to such filing.

(Emphasis added). The German patent was filed November 13, 2002. As the International Application was filed within 12 months of the filing date of the earlier filed German application, the International Application has an effective filing date as of the filing date of the earlier filed German application.

Zhuang et al. is not prior art to the present application because Zhuang et al. was filed on April 2, 2003, which is subsequent to the effective filing date of the present application, which is November 13, 2002. Because Zhuang et al. was cited in rejecting each of independent claims 1, 13 and 17, but because Zhuang et al. is not prior art, the Office Action does not state a *prima facie* case of obviousness to any of claims 1, 13 and 17 or the claims which depend therefrom. In view of this, Applicant respectfully submits that claims 1-20 are patentable over the prior art of record for this reason alone.

In addition, when one considers the teachings of Figlar et al. and Loercks et al. in the absence of Zhuang et al., it is clear that the claims are patentable over these references. Claim 1 as previously presented claims a filter element used in manufacturing tobacco smoke filters. The filter element comprises a filtering material which substantially contains starch and/or a starch-based polymer mixture and includes pores and/or filter channels being open in the direction of gas flow. The pores and/or filter channels having a diameter in a range of about 50  $\mu\text{m}$  to about 100  $\mu\text{m}$ . In addition, the filtering material is arranged in alternately succeeding layers comprised of starch and/or a starch-based polymer mixture and activated carbon and the layers are stacked transversely with respect to the direction of gas flow. The combined teachings of Figlar et al. and Loercks et al. do not suggest the combination of elements recited in claim 1 as previously presented. For example, Figlar et al. and Loercks et al., either alone or in combination, fail to suggest the inclusion of pores and/or filter channels having a diameter in a

range of about 50  $\mu\text{m}$  to about 100  $\mu\text{m}$  in combination with the other elements recited in claim 1. Accordingly, claim 1 is patentable over Figlar et al. and Loercks et al. for this reason alone.

Claims 2-12 depend from claim 1 and are therefore patentable over the combination of Figlar et al. and Loercks et al. for at least those reasons given above relative to claim 1. In addition, they include additional elements that may further distinguish over Figlar et al. and Loercks et al. For example, claim 6 further requires the inclusion of natural fibers selected from the group consisting of cellulose fibers, hemp and cotton fibers in an amount of at least about 5% by volume. None of the applied references discloses or suggests the inclusion of natural fibers in combination with starch and/or starch-based polymer mixture in a filtering material, much less cellulose fibers, hemp or cotton fibers. Whereas Figlar et al. discloses conventional filters that may include a combination of cellulose and cotton fibers, there is no suggestion in Figlar et al. regarding the desirability of combining natural fibers with starch and/or a starch based polymer mixture. As Loercks et al. also fails to disclose or suggest combining natural fibers with starch and/or a starch based polymer mixture, there was no teaching, suggestion, motivation or other reason that would have led one of skill in the art to combine natural fibers with starch and/or a starch based polymer mixture in a filter element.

Claim 10 further specifies that the filter channels are formed by water jets, needles or a laser beam. Neither Figlar et al. nor Loercks et al. discloses or suggests forming filter channels in any of the ways recited in claim 10.

Claim 13 as previously presented alternatively claims a filter element used in manufacturing tobacco smoke filters which comprises a filtering material which substantially contains starch and/or a starch-based polymer mixture and includes a plurality of pores and/or filter channels aligned partly transversely relative to the direction of gas flow through the filtering material. In addition, the filtering material is arranged in alternately succeeding layers comprised of starch and/or a starch-based polymer mixture and activated carbon and the layers are stacked transversely with respect to the direction of gas flow. The combination of Figlar et al. and Loercks et al. fails to disclose or suggest the combination of elements recited in claim 13. For example, neither discloses or suggests a filter element in which a plurality of pores and/or filter channels are aligned partly transversely relative to the direction of gas flow through the filtering material. In view of this, claim 13 is patentable over Figlar et al. and Loercks et al. for this reason alone.

Claims 14-16 depend from claim 13 and are therefore patentable over Figlar et al. and Loercks et al. for at least those reasons given above relative to claim 13. In addition, they include additional elements that may further distinguish over Figlar et al. and Loercks et al. For example, claim 14 specifies that the filter element further comprises pores and/or filter channels that are generally aligned in the direction of gas flow through the filtering material. In other words, claim 14 requires some of the pores to be aligned in the direction of the gas flow and other of the pores to be aligned partly transversely relative to the direction of the gas flow. None of the art of record discloses any such combination of pore structures.

Claim 16 further specifies that the pores and/or filter channels have a diameter in a range of about 50  $\mu\text{m}$  to about 100  $\mu\text{m}$ . As discussed above relative to claim 1, neither Figlar et al. nor Loercks et al. discloses or suggests pores and/or filter channels within the specified size range of claim 16.

Claim 17 alternatively claims a filter element used in manufacturing tobacco smoke filters which comprises a filtering material which contains substantially starch and/or a starch-based polymer mixture and at least about 5% by volume of natural cellulose fibers, and which includes a plurality of pores and/or filter channels extending at least partially through the filtering material. In addition the filtering material is arranged in alternatingly succeeding layers comprised of starch and/or a starch-based polymer mixture and activated carbon and the layers are stacked transversely with respect to the direction of gas flow. As discussed above relative to claim 6, none of the art of record discloses or suggests a filter element that includes a combination of starch and/or a starch-based polymer mixture and at least about 5% by volume of natural cellulose fibers.

Claims 18-20 depend from claim 17 and are therefore patentable over Figlar et al. and Loercks et al. for at least those reasons given above relative to claim 17. In addition, they include additional elements that may further distinguish over Figlar et al. and Loercks et al. For example, claim 19 further specifies that the pores and/or filter channels have a diameter in a range of about 50  $\mu\text{m}$  to about 100  $\mu\text{m}$ . As discussed above relative to claims 1 and 16, neither Figlar et al. nor Loercks et al. discloses or suggests pores and/or filter channels within the specified size range of claim 16.

In view of the foregoing, Applicant submits the Application is in allowable condition. In the event the Examiner finds any remaining impediment to a prompt allowance of this

application that may be clarified through a telephone interview or which may be overcome by Examiner amendment, the Examiner is requested to contact the undersigned attorney.

The Commissioner is hereby authorized to charge payment of any of the following fees that may be applicable to this communication, or credit any overpayment, to **Deposit Account No. 23-3178**: (1) any filing fees required under 37 CFR § 1.16; (2) any patent application and reexamination processing fees under 37 CFR § 1.17; and/or (3) any post issuance fees under 37 CFR § 1.20. In addition, if any additional extension of time is required, which has not otherwise been requested, please consider this a petition therefore and charge any additional fees that may be required to **Deposit Account No. 23-3178**.

Dated this 7th day of August 2009.

Respectfully submitted,



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